



## Medical School Hotline

### School Health Education at the Queen Emma Clinics: A Service-Learning Project at the John A. Burns School of Medicine

**Damon H. Sakai MD, Michael H. Fukuda MSW,  
Ivy L. Nip MD, and Richard T. Kasuya MD**

The JABSOM School Health Education Program through the Queen Emma Clinics, provides first-year medical students, the opportunity to work in collaboration with public high school teachers, utilizing a service-learning model to teach health care topics particularly important to high school students. The primary purpose of the program is to provide our medical students with a high-quality educational experience in health promotion, health education, and social responsibility.

Service-learning is an educational method that can help academic centers and communities collaborate to improve health care. The foundation of service-learning is a balanced partnership between communities and participating schools and a balance between serving the community and meeting defined learning objectives. It has its theoretical roots in experiential learning theory and it enhances the medical school curriculum by extending learning beyond the lecture halls and hospitals, allowing students to apply what they are learning about health to real world situations. It provides opportunities for reflection on community service and social responsibility. Some examples of service-learning at universities include University of Utah pharmacy students providing companion care to homebound elderly as part of a course on the foundations of pharmacy practice and George Washington University medical students working with community agencies in interdisciplinary teams to design health promotion programs<sup>1</sup>.

In service-learning, medical schools and community partners design their courses, keeping in mind the differing needs and expectations of each partner. For example, the main objective of medical school faculty collaborating with high school teachers on a health course for adolescents might be to help medical students learn about common health problems in teenagers and how to be better teachers. The main objective of high school teachers might be for their high school students to learn about adolescent health problems from medical students and have medical students serve as positive role models by meeting regularly with the students assigned to them. The main objective of the medical students might be to learn how to communicate with adolescents and have fun. The main objective of the high school students might be to learn about health issues and a career in health care. In service-learning, these various needs and expectations must be negotiated<sup>1</sup>.

Our recent experience suggests this service-learning model can be successful. In 1999, as a part of its community medicine curriculum, JABSOM and the Queen Emma Clinics successfully piloted a model in which five medical students worked with high school teachers for 12-14 weeks, to provide high quality health education to high school students. They discussed topics such as drug use, sexually transmitted diseases, and tobacco use. By using pretests and posttests

medical students were able to show a statistically significant increase in high school student knowledge after their educational interventions<sup>2</sup>. They also believed they had an impact on high school students' beliefs and attitudes. Said one high school student after a medical student-led session, "I have considered smoking before, but knowing all of the consequences, forget it." Another said, "I've never smoked before, but after this session, I know I never will."

This year, partly in response to feedback from previous participants, five medical students were chosen to develop a longitudinal relationship with selected public high schools over the entire academic year. They provide health education through active service-learning. To better prepare them for their roles as teachers this year, medical school faculty introduced these medical students to educational principles and curriculum design skills prior to their teaching sessions at the high schools. Students were mentored through their creation of teaching sessions on topics suggested by high school teachers. To date, they have applied their new skills to the development of engaging and imaginative educational experiences on topics like sex education, drugs and substance abuse, diet, exercise, and nutrition. A one-group pretest-posttest study of high school students' knowledge of sex education showed that they learned from these sessions. The two participating classes demonstrated a significant increase in their mean score of correct answers on a written test following the medical student classroom intervention (class one:  $t = 3.63$ ,  $df = 49$ ,  $p < 0.05$ ; class two:  $t = 5.8$ ,  $df = 53$ ,  $p < 0.05$ ).

In addition to improving high school student knowledge, medical students in this course have offered additional reasons to explain why participating is such a satisfying experience for them. They believe that by teaching high school students about topics like tobacco use, alcohol use, and sexuality, they are not only learning information important to their careers as physicians, but also making a difference for young people even as first-year students. They believe that because they are similar in age and background to the high school students, they easily identify with each other and exchange questions and ideas that might not be shared with other instructors. Medical students feel this course has made them better teachers. They see a clear connection between this experience and how they will educate their patients in practice. Finally, medical students believe that this program has increased their appreciation for the role community service and social responsibility should play in the life of a physician. They believe they are more likely to contribute to their community in the future.

The Department of Education for the State of Hawaii has developed *Health Content Standards* representing the learning objectives for health education for all students from kindergarten to high school in Hawaii. It includes topics like diet, nutrition, exercise, tobacco, alcohol, drug use, and life-long learning skills. JABSOM is uniquely positioned to be a source of up-to-date medical knowledge and health education for the state of Hawaii. In addition, the problem-based learning method employed by JABSOM requires dynamic peer teaching by medical students and projects like the School Health Education Program are natural extensions of this process. By aligning its goals with partners like our public high schools, JABSOM may positively impact health outcomes in Hawaii in the future.

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Physicians in the 21<sup>st</sup> century must not only master the clinical content of medicine, but also recognize their role in the health of their community. Altruism, social responsibility, and community service help to define the professional standards of our graduates and therefore, should be modeled and taught as an important part of our curriculum. Formally incorporating a sense of social responsibility is consistent with our medical school's mission to improve health care in Hawaii.

The mission of each academic center is its moral compass<sup>3</sup>. Medical schools of the future will demonstrate their greatness not only through traditional missions in education and research, but by the service they provide through community partnerships and the quality of the contributions their graduates make to better their world.

A service-learning program for medical students to teach health issues to high school students represents an innovative curricular response to meet JABSOM's mission, the educational objectives of our medical students, and the health care needs of the state. It also provides a mechanism to introduce social responsibility into our educational program and evolve the community medicine curriculum into an educational experience that provides meaningful roles for first-year medical students in the real world.

#### References

1. Seifer SD. Service-learning: Community-campus partnerships for health professions education. *Acad Med* 1998;73(3):273-277.
2. Belorgey L, Chung H, Figueroa R, Hayashi M, Hudak D, Nomura J, Sakai D, Fukuda M. The effectiveness of an educational outreach program at a high school by first year medical students. *American College of Physicians - American Society of Internal Medicine Hawaii Chapter Scientific Meeting*; 2000 Mar 3-4; Honolulu, Hawaii.
3. Pellegrino ED. Academic health centers and society: An ethical reflection. *Acad Med* 1999;74(8):S21-S26.

#### Cancer Research Center Hotline, continued from p. 15

Donna Au, MPH, RD, is the lead nutritionist for the NSSR, and is assisted by three other research nutritionists and two dietetics students. Typical activities include designing data collection instruments, training interviewers, reviewing the accuracy of dietary records and recalls, and assisting with data entry and analysis.

The availability of a centralized NSSR, with specific expertise in collecting and analyzing dietary data for residents of Hawaii, allows CRCH investigators to obtain high quality intake data in a cost-efficient manner. Investigators from other research groups may also use the NSSR facilities for a nominal fee.

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